Attorney Docket No: NSL-022

In the United States Patent and Trademark Office

Application No.:	Not Yet Assigned
Filed:	Herewith
Title:	Photovoltaic Devices Fabricated From Nanostructured Template
Applicant:	Brian M. Sager et al.
Examiner:	Not Yet Assigned
Art Unit	Not Yet Assigned

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Mailed Feb. 2, 2004
Fremont, CA

Information Disclosure Statement

Commissioner of Patents and Trademarks
Washington, District of Columbia 20231

Dear Sir or Madam:

Attached is a completed Form PTO-1449 and copies of the pertinent parts of the references cited thereon.
It is requested that the document(s) on the enclosed form be made of record. As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.
It is requested that the document(s) on the enclosed form be made of record.

Part I (Authority)

This statement is filed pursuant to:

(X) 37 C.F.R. § 1.97(b).
This information disclosure statement is filed either (1) within three months of the filing date of the national applications; (2) within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application; (3) before the mailing date of a first office action on the merits; or (4) before the mailing of a first Office action after the filing of a request for continued examination under §1.114, whichever event occurs last.
Accordingly, this information disclosure statement requires no fee and no certification.

( ) 37 C.F.R. § 1.97(c).
This information disclosure statement is filed after the period specified in 37 C.F.R. § 1.97(b), but before the mailing date of either (1) a final action under 37 C.F.R. § 1.113 or (2) a notice of allowance under 37 C.F.R. § 1.311.
Accordingly, this information disclosure statement requires either the fee specified in 37 C.F.R. § 1.17(p) for submission of an information disclosure statement under 37 C.F.R. § 1.97(c) ($180), or a certification according to 37 C.F.R. § 1.97(e).

( ) 37 C.F.R. § 1.97(d).
This information disclosure statement is filed after the period specified in 37 C.F.R. § 1.97(c).
Accordingly, this information disclosure statement requires the petition fee specified in 37 C.F.R. § 1.17(p) to consider an information disclosure statement under 37 C.F.R. § 1.97(d) ($180) and a certification according to 37 C.F.R. § 1.97(e).

Conditional Petition

It is respectfully requested that this information disclosure statement be considered, good cause being presented in Part III herein (certification). Please treat this paper as the required petition.

If this statement crosses in the mail with an office action, or is otherwise not in the indicated category of 37 C.F.R. § 1.97, it is respectfully requested that this statement be treated in the next appropriate category and made of record.

To the extent required, please treat this paper as a conditional petition for acceptance of the information disclosure statement.

Part II (Payment)

A check is enclosed as indicated:

(X) No fee is due.

( ) The fee specified in 37 C.F.R. § 1.17(p) for submission of an information disclosure statement under 37 C.F.R. § 1.97(c) is enclosed ($180).

( ) The petition fee specified in 37 C.F.R. § 1.17(p) to consider an information disclosure statement under 37 C.F.R. § 1.97(d) is enclosed ($180).

Part III (Certification)

Pursuant to 37 C.F.R. § 1.97(e), I certify:

(X) No certification is necessary.

( ) (1) Each item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the statement.

( ) The "communication from a foreign patent office" referred to in the certification is an International Search Report, possibly issued by the U.S. Patent and Trademark Office in its capacity as an International Search Authority or International Preliminary Examining Authority.

( ) The "counterpart foreign application" referred to in the certification corresponds to an ancestor or descendent application of the application for which this information disclosure statement is filed.

( ) (2) No item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c), more than three months prior to the filing of the statement.

Part IV (Additional Statement)

An additional statement regarding these items of information ( ) is, (X) is not, enclosed.

Copies of the cited art references **M-N and AU-BA** (X) are enclosed,

Copies of the cited art references **O-AT** (X) are of record in parent application Serial No. **10/443,456** and will be provided if the Examiner deems it convenient.

Copies of the cited art references **A-L** (X) are not required under 37 CFR 1.98(a)(2)(i) because they are U.S. Patents and/or U.S. Patent Publications and

(X) the present application was filed after June 30, 2003, or

( ) the present application is an international application that entered the national stage under 35 USC 371 after June 30, 2003.

Dated: Feb. 2, 2011

Respectfully submitted,

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FORM PTO-1449U.S. DEPARTMENT OF COMMERCE	ATTY. DOCKET NO. **NSL-022**	SERIAL NO. **Not Yet Assigned**
LIST OF PRIOR ART CITED BY APPLICANT (Use several sheets if necessary)	APPLICANT **Brian M. Sager** et al.	
	FILING DATE **Herewith**	GROUP **Not** Yet Assigned

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A	5,482,570	1/9/1996	Saurer et al.	136	255	6/22/1994
	B	6,270,846	8/7/2001	Brinker et al.	427	385.5	3/2/2000
	C	6,340,789	1/22/2002	Petritsch et al.	136	263	9/15/2000
	D	6,278,056	8/21/2001	Sugihara et al.	136	263	3/18/1999
	E	5,525,440	6/11/1996	Kay et al.	429	111	11/2/1993
	F	2002/0134426A1,	09/26/2002	Chiba et al.	136	263	1/29/2002
	G	2002/0017656A1	02/14/2002	Graetzel et al.	257	184	7/30/2001
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	J	5,990,415	11/23/1999	Green et al.	136	255	12/8/1995
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	L	6,291,763 B1	9/18/2001	Nakamura, Shigeru	136	256	4/5/2000

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
	M	EP1028475 A1	8/16/2000	Europe	H01L	51/20	EP1028475 A1
	N	EP1087446 A2	3/28/2001	Europe	H01L	31/0352	EP1087446 A2

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

	O		M. Granstrom, K. Petritsch, A. C. Arias, A. Lux, M. R. Andersson & R. H. Friend. 1998. Laminated fabrication of polymeric photovoltaic diodes. Nature 395, 257-260
	P		Gebeyehu, D., Brabec, C.J., Saricifti, N.S., Vangeneugden, D., Kiebooms, R., Vanderzande, D., Kienberger, F., and H. Schnindler. 2002. "Hybrid Solar Cells based on dye-sensitized nanoporous TiO2 electrods and conjugated polymers as hole transport materials. Synthetic Metals 123, 279-287.
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	R		Hongyou Fan, Yunfeng Lu, Aaron Stump, Scott T. Reed, Tom Baer, Randy Schunk, Victor Perez-Luna, Gabriel P. Lopez & C. Jeffrey Brinker. 2000. Rapid prototyping of patterned functional nanostructures, Nature 405, 56-60
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EXAMINER	**DATE CONSIDERED**

*** EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)			
	T		Michael H. Huang, Amer Choudrey and Peidong Yang, "Ag Nanowire Formation within Mesoporous Silica" *Chem. Commun.*, 2000, 1063–1064
	U		Andrew A. Gewirth, Panos C. Andricacos, and Jay A. Switzer, with John O. Dukovic, editor "Hot Topics in Electrodeposition", The Electrochemical Society *Interface* • Spring 1998
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	W		Huang Y, Duan, X, Wei, Q, & C.M. Lieber, "Directed Assembly Of One-Dimensional Nanostructures Into Functional Networks" *Science* **291**(5504):630-633 (2001).
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	AF		Green et al. "Solar Cell Efficiency Tables *(version 11)*", Proges in Photovoltaics: Research and Applications, **6**, 35-42 (1998).
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	AK		S.Z Chu et al., "Synthesis and Characterization of Titania Nanostructures on Glass by Al Anodization and Sol-Gel Process," *Chem. Mater.* **14**, pp 266-272, 2002
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OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)			
	AM		U.S. Patent Application Serial No. 10/290,119, to Brian M. Sager et al., filed November 5, 2002 and entitled "OPTOELECTRONIC DEVICE AND FABRICATION METHODS"
	AN		U.S. Patent Application Serial No. 10/303,665 to Martin R. Roscheisen et al. entitled "MOLDING TECHNIQUE FOR FABRICATION OF OPTOELECTRONIC DEVICES" and filed on November 22, 2002
	AO		U.S. Patent Application Serial No. 10/319,406 to Brian M. Sager et al., filed on December 11, 2002 and entitled "NANO-ARCHITECTED/ASSEMBLED SOLAR ELECTRICITY CELL"
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	AS		Thuc-Quyen Nguyen, Junjun Wu, Vinh Doan, Benjamin J. Schwartz, Sarah H. Tolbert. 2000. Control of Energy Transfer in Oriented Conjugated Polymer–Mesoporous Silica Composites. Science 288, 652-656
	AT		Heeger, A.J. 2002 Semiconducting and metallic polymers: the fourth and fifth generation of polymeric materials. Synthetic Metals 125, 23-42
	AU		Kruger et al, "High Efficiency Solid-State Photovoltaic Device Due to Inhibition of Interface Charge Recombination," Applied Physics Letters, Vol 79, No. 13, 24, pp 2085-2087, September 2001, American Institute of Physics, College Park, MD
	AV		P. Wang, et al. "A Stable Solid-State Dye-Sensitized Solar Cell with an Amphiphillic Ruthenium Sensitizer and Polymer Gel Electrolyte", Nature Materials, Vol. 2, June 2003 pp 402-407 (Published online May 18, 2003), Nature Publishing Group, London, UK
	AW		L. Drummy et al., "Direct Imaging of Defect Structures in Pentacene Nanocrystals" Advanced Materials vol 14, No. 1, pp. 54–57 January 4, 2002, Wiley-VCH, Verlag GmbH, Wienheim, Germany
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	AY		B. O'Reagan, et al., "Large Enhancement in Photocurrent Efficiency Caused by UV Illumination of the Dye Sensitized Hereojunction TiO_2/RuLL'NCS/CuSCN: Initiation and Potential Mechanisms", Chemical Materials, Vol. 10, pp. 1501-1509, published on the web, May 20, 1998, American Chemical Society, Washington, DC
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	BB		D. Gong et al., titanium oxide nanotube arrays prepared by anodic oxidation," in J. Mater. Res., Vol 16, No 12, pp. 3331-3334, Dec., 2001, Materials Research Society
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	BE		V. Zwilling et al., "Anodic oxidation of titanium and TAV6 alloy in chromic media. An electrochemical approach," in Electrochemica Acta. Vol 45, pp 921-929, 1999, Elsevier Science, Ltd.

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